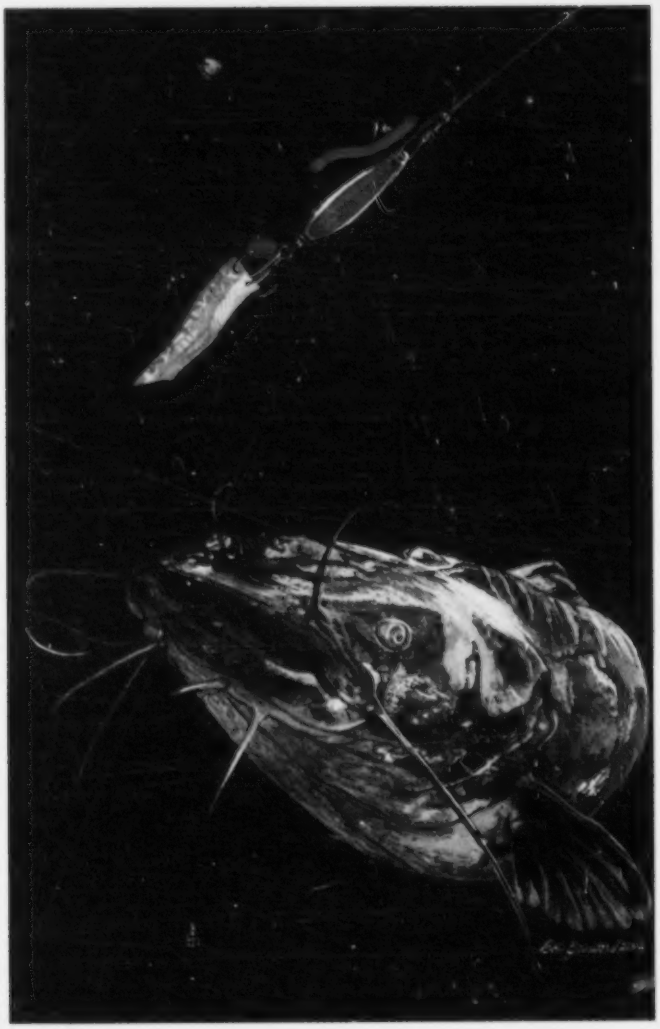
Manitoba Fisheries Enhancement Initiative

2001-2002



Protecting & Managing our Future

Manitoba
Building for the Future

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FISHERIES ENHANCEMENT INITIATIVE

STAMP AND PRINT COMPETITION

Featured on the cover is the winning painting of the 2001 Stamp and Print Competition. "Fat Cat", an acrylic painting of a catfish, was painted by Robert Brown of East St. Paul, Manitoba. His painting was chosen from 31 entries.

This painting was reproduced into limited edition prints and stamps to promote the Fisheries Enhancement Initiative Fund. A total of 280,000 Fisheries Enhancement Stamps were prepared. The Licensing Branch of Manitoba Conservation used 275,000 stamps to validate provincial sport and commercial fishing and bait dealer licences. Collectors can purchase the remaining stamps.

Stamps and prints can be purchased from Manitoba Conservation at 200 Saulteaux Crescent, Winnipeg or call 1-204-945-7797.

ABOUT THE ARTIST

Bob Brown was born in Winnipeg, Manitoba and has resided there all his life. After graduating from high school, he entered the Faculty of Arts and Science at the University of Manitoba. He decided that this was not the career path he wanted to follow, so after his second year he chose to pursue a career in art.

The next year Bob graduated from Winnipeg's Technical Vocational Trade School in the Advertising Art Course. To round out his education, he enrolled in the Faculty of Fine Arts and four years later obtained a Diploma in Fine Arts.

Bob then spent seven years working as an advertising agent and art director for various companies including the Hudson's Bay Company and McKim, Benton and Bowles Advertising. In 1972 Bob started his own company which he still manages.

Throughout his career Bob has won numerous awards for both his graphic design and illustration. Bob has been married to his wife Sigrid for 35 years. They have one son, Darren and daughter-in-law, Marlene.

ARTIST'S STATEMENT

The channel catfish attracts fishermen from all over the world to sample what Manitoba's Red River has to offer. Not only is it an exciting fish to battle, but it is also one of the best tasting fish to eat. In many restaurants it is considered a delicacy.

Because of its worldwide reputation for size it is a tremendous boost to tourism in Manitoba.

Bob Brown with his winning artwork.

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THE PROGRAM

Working with community groups, associations and agencies, the Manitoba Fisheries Enhancement Initiative is a government fund for improving our fish populations and fish habitat. In 2001/02 the Initiative invested $350,000 in conservation, enhancement, communication and education projects throughout the province. Part of the funds were used for program promotion, the stamp painting competition and artist's prize, producing the 2002 Fisheries Enhancement Stamp and limited edition print, producing a brochure and poster, and an advertisement in the 2002 Sport Fishing Guide. Many of the projects funded by the Initiative were done in co-operation with other government and non-government agencies. This ensures that fisheries enhancement values are incorporated in other sectors, like agriculture, forestry and highways, furthering Manitoba's efforts to build sustainable economic development.

MESSAGE FROM THE MINISTER OF MANITOBA CONSERVATION

I am pleased to present the annual report of the Manitoba Fisheries Enhancement Initiative.

In the 2001/2002 year, participation in the Initiative resulted in 23 projects receiving funds. Many projects were directed either at watershed surveys generated through watershed stewardship groups or at site-specific projects identified in earlier inventories.

The dedication, desire and enthusiasm of Manitobans supporting watershed stewardship greatly assists in delivering the FEI program.

This was another successful year for the FEI annual stamp painting competition with 31 paintings entered. The winning entry is an example of the world-renowned angling resource we have right here in the Red River – the catfish. Production of the stamp and limited edition print provides an opportunity to promote the Initiative and highlight the incredible and abundant artistic talent that we have in our province.

I thank you for supporting the Manitoba Fisheries Enhancement Initiative and making it a benefit to all Manitobans.

Steve Ashton
Minister
Manitoba Conservation

INTRODUCTION

The projects funded by the Fisheries Enhancement Initiative are described under four categories:

1. Stream Enhancement includes watershed surveys, riffles and pools, stream bank rehabilitation and fishways.
2. Lake Enhancement includes aeration and riparian protection.
3. Population Management includes screening, stocking, transfers and rearing ponds.
4. Public Education includes projects that inform the public about fisheries issues.

A brief summary of each category and its projects follows.

STREAM ENHANCEMENT

Stream enhancement efforts focus on improving habitat productivity to increase the abundance or diversity of fish. Although many short sections of streams have been improved, there are an increasing number of projects that consider all the land area (watershed) that contributes runoff to a stream. This is based on the recognition that what affects productivity in one part of a watershed eventually affects other sites downstream. Watershed rehabilitation is a way to protect, conserve and restore the environmental quality of watersheds for people, aquatic life and wildlife.

WATERSHED SURVEYS

A watershed approach usually involves the participation of many interested stewards and a consultant to:

- identify issues, compile background information, inventory tributaries;
- identify and prioritize sites and;
- design and implement rehabilitation measures.

PROJECTS:

1. **Boshill, Stony, Nisco and Gopher Creeks**
   West Souris River Conservation District
   Funding: $18,500
   Project Status: Near Completion

The evaluation of these four streams is a continued effort to evaluate streams in the district. A report will compile information gathered from all the inventories and provide a prioritized list of actions needed to restore the health of these systems. The information generated from these evaluations provides important fisheries data necessary to making sound management decisions.

2. **Valley River**
   Valley River Watershed Board
   Funding: $25,000
   Project Status: Completed

Stakeholders in the Valley River watershed came together over concerns with water quality. They formed the Valley River Watershed Board and under the direction of the Intermountain Conservation District hired a consultant to evaluate current land use practices along the Valley River that might negatively affect water quality and fish habitat. A report of this watershed study was produced.

ENHANCEMENT TECHNIQUES

The following are enhancement techniques used to improve watersheds and site-specific areas within watersheds. Some projects use a combination of techniques to restore streams affected by a variety of interrelated problems. These techniques can include riffle-pool sequences and fishways, as well as fencing, bank armouring with rock (rip-rap), bank revegetation and debris removal. Soil bioengineering is another tool now used to provide long-term bank stability. This technique involves the use of live woody vegetation. Dormant cuttings of willow, cottonwood or other species are installed along the shoreline. The cuttings quickly generate root mass that binds the soil together and, in time, the above-ground portion provides shade along the stream.

PROJECTS:

1. **Lake Manitoba West Side Tributaries Inventory**
   Lake Manitoba Fish Enhancement Committee
   Funding: $25,000 redirected to Watchorn Creek and Fish Line Drain Enhancement
   Project Status: Ongoing

The proponents submitted this proposal to continue a study of the tributaries that enter the north basin of Lake Manitoba, this time focusing on the west side. Once a stakeholder group was established on the west side it made more sense to have a proposal come from them so the $25,000 was redirected to site specific enhancement sites on Watchorn Creek and Fish Line Drain. These sites were identified in the Phase I Inventory report as sources of nutrient and sediment loading. Fencing and off-stream watering devices were installed and rotational grazing practices implemented to re-establish stream bank vegetation.

2. **Sturgeon Creek**
   Manitoba Wildlife Federation
   Funding: $15,000
   Project Status: Completed

This ongoing effort to rehabilitate Sturgeon Creek involved the planning and design of riffles in the upstream urban and rural reaches. A consultant also determined options for integrating Grant's Lake Marsh with Sturgeon Creek to return the creek and its headwater marsh into a functioning watershed with the marsh providing fish spawning and rearing areas and water quality benefits.

Enhancement, on Brookdale Drain (a), through fencing (b), off-stream waterers (c) and controlled crossings will reduce the amount of erosion and nutrients entering Lake Irwin. Proposed sites were identified as high priority in the 1998/99 inventory.

a

3. **Brookdale Drain**
   Whitemud Watershed Conservation District
   Funding: $25,000
   0Project Status: Completed

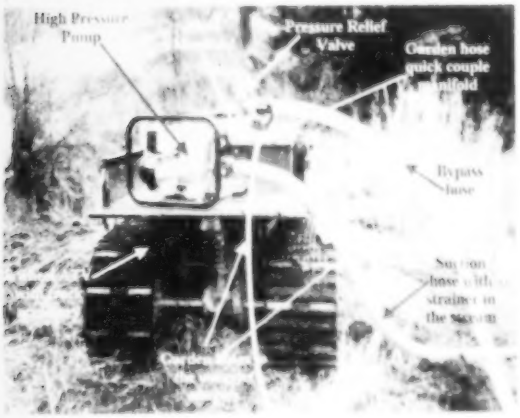
Brookdale Drain enters Lake Irwin and was identified as a contributor to the declining water quality in the lake. Lake Irwin, a main waterbody in the Neepawa area, is heavily used for recreation and in particular, fishing. Stream bank enhancement through fencing, off-stream waterers and controlled crossings will reduce the amount of erosion and nutrients entering Lake Irwin.

b

c

4. Provincial
   Minnedosa Lake Rehabilitation Committee / International Erosion Control Association
   Funding: $2,500
   Project Status: Completed

A waterjet stinger was purchased for a two-day workshop to demonstrate how this tool is used to reduce erosion and protect water quality during construction. The waterjet stinger drills holes for planting unrooted willow and cottonwood cuttings. The Manitoba Conservation District's Association now has it for further demonstration and education.



FISHWAYS

Most fishways use either weirs or baffles to reduce water velocity and create compartments or pools of slow water where fish can rest. These structures enable fish to climb a river via a series of steps over or around high dams and waterfalls.

PROJECTS:

1. Plum Creek
   Town of Souris
   Funding: $19,955
   Project Status: Completed

Fish passage was provided at an obstruction on Plum Creek by placing rock on the downstream face of the weir and constructing a riffle immediately downstream. The Town of Souris also resloped and armoured 130 meters of bank to reduce sediment load to the creek.

2. Shell River
   Lake of the Prairies Conservation District
   Funding: $6,500
   Project Status: Completed

A watershed inventory on the Shell River identified Inglis Beach dam as an

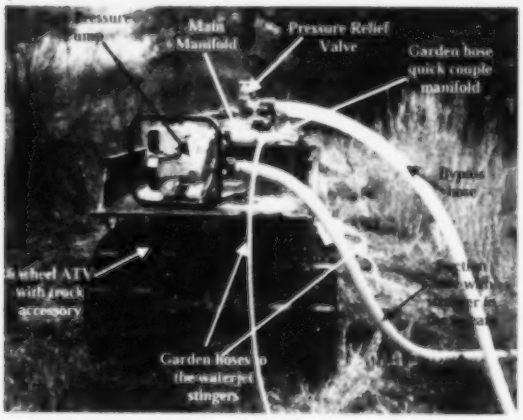
a

4. **Provincial**
   Minnedosa Lake Rehabilitation Committee / International Erosion Control Association
   Funding: $2,500
   Project Status: Completed

A waterjet stinger was purchased for a two-day workshop to demonstrate how this tool is used to reduce erosion and protect water quality during construction. The waterjet stinger drills holes for planting unrooted willow and cottonwood cuttings. The Manitoba Conservation District's Association now has it for further demonstration and education.

One of the advantages of the waterjet stinger system (a & b) compared to the stinger (c) is it is simple to operate and transport with minimal training required before operating. The stinger drills holes for planting un-rooted willow and cottonwood cuttings.

b



c

FISHWAYS

Most fishways use either weirs or baffles to reduce water velocity and create compartments or pools of slow water where fish can rest. These structures enable fish to climb, through a series of steps, over or around high dams and waterfalls.

PROJECTS:

1. **Plum Creek**
   Town of Souris
   Funding: $19,955
   Project Status: Completed

Fish passage was provided at an obstruction on Plum Creek by placing rock on the downstream face of the weir and constructing a riffle immediately downstream. The Town of Souris also resloped and armoured 130 meters of bank to reduce sediment load to the creek.

2. **Shell River**
   Lake of the Prairies Conservation District
   Funding: $6,500
   Project Status: Completed

A watershed inventory on the Shell River identified Inglis Beach dam as an

The Inglis Beach dam on the Shell River blocks fish migration to upstream spawning, nursery, feeding and over-wintering habitats. A consultant was hired to investigate a range of remedial options for providing passage.

obstruction to fish passage. A consultant investigated a range of remedial options for providing fish passage at the dam while protecting the plunge pool downstream currently utilized by fish and maintaining the upstream pool used for recreational purposes. Shell River is home to the chestnut lamprey and big-mouth shiner, two fish listed as "Species of Concern" by COSEWIC. The project offers an opportunity to raise public awareness on the importance of healthy fish habitat and its role in maintaining rare and valued species. All life stages of walleye were collected in the reach below the dam.

LAKE ENHANCEMENT

Many natural factors, including water quantity, depth and chemistry, determine what fish species a lake can support. Human factors, including fishing, changes in land use around lakes, nutrient loading and introduction of new species have altered fish communities in Manitoba lakes. Lake enhancement techniques in this category deal with specific problems like low oxygen levels, lack of spawning areas, shoreline stabilization or water level control. As growing awareness brings concerned persons, cottagers and fish and game associations together, a new approach to lake enhancement will take place – lake management associations. Lake management associations will work hard to improve the health of the whole lake system.

PROJECTS:

1. **Kingfisher Lake, Birds Hill Park**
   Manitoba Fly Fishers Association
   Funding: $25,000
   Project Status: On hold

Opportunities to fly fish for trout are limited in southern Manitoba especially for the physically challenged. Kingfisher Lake at Birds Hill Park was deepened and an aeration unit installed to support a trout fishery. Fishing platform and trails were developed so the fishery is accessible to all. Since these works, pike were discovered in the lake and ongoing project plans to re-establish a trout fishery are on hold.

2. **Arrow Lake**
   Rossburn Game and Fish Association
   Funding: $15,000
   Project Status: Completed

Arrow Lake has been a very successful walleye fishery in the western region for many years. It is stocked annually and natural reproduction is thought to be minimal if any. The lake has been demonstrating declining oxygen levels in recent years and has experienced partial winter kills that have affected angling quality and stocking success. A total lake aeration unit was purchased and installed to address this issue.

The Parkland Region has a couple lakes that have reputations as world class trout fisheries. In this proposal FLIPPR would like to develop two more lakes to the same status.

3. Parkland Region

Fish and Lake Improvement Program for the Parkland Region (FLIPPR)
Funding: $5,925
Project Status: Completed

FLIPPR would like to increase trout fishing opportunities in their region. They have done preliminary surveys of 42 lakes through a grant from Human Resources and the Employment Partnership Program. They need to do a more in-depth investigation of the top-ranked lakes to determine their ability to grow trophy trout. FLIPPR will then determine the lake's suitability or need for winter aeration. If aeration is required they will also determine landowner access issues, hydroelectric availability and future liability issues.

4. Patterson Lake

Fish and Lake Improvement for the Parkland Region (FLIPPR)
Funding: $22,493
Project Status: Completed

A total lake aeration system was purchased for Patterson Lake. This lake is located in the RM of Rossburn. It was identified in a previous study undertaken by the proponent as the most suitable lake for the development of a trout fishery with the aid of aeration. The intent of the proposal is to create additional trout angling opportunities for Manitobans.

5. Goudney Reservoir

Pembina Valley Conservation District
Funding: $7,800
Project Status: Ongoing

Goudney Reservoir provides the community with a source of drinking water and sustains a reasonable fishery. Current land use practices around the reservoir and in-flowing creek are threatening both the water quality and the fishery. The land management plan will provide alternative practices that are environmentally sustainable.

Goudney Reservoir provides the community with a source of drinking water and sustains a reasonable fishery. Current land use practices around the reservoir and in-flowing creek are threatening both the water quality and the fishery. The land management plan will provide alternative practices that are more environmentally friendly.

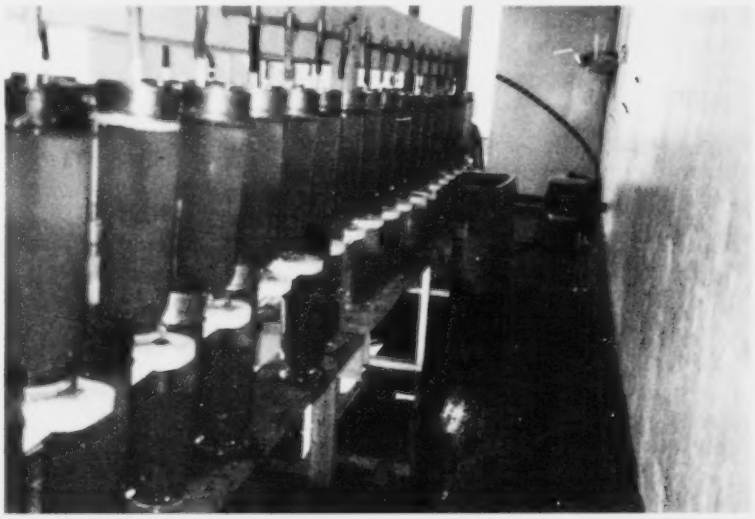
POPULATION MANAGEMENT

Population management includes many fisheries assessment and research techniques, such as angler creel and gill-net surveys. Information from these surveys is used in developing fishing regulations and land-use controls to ensure that enough fish can spawn at least once before being caught by anglers or commercial fishermen. Fisheries managers conduct fisheries assessment and research, often with help from interested groups. User groups become more involved with fish population management through various techniques, such as rearing, screening, stocking or transferring.

PROJECT:

1. **Chitek Lake**
   Lake Waterhen Fishermen's Association
   Funding: $25,000
   Project Status: Ongoing

Twenty-six years ago there were no walleye in Chitek or Inland Lake until the province started stocking them annually. Now a commercial fishery exists, however there is limited to no natural spawning habitat for the walleye. The Association will build a permanent fish hatchery at Chitek Lake to collect and incubate the spawn. The fry will be used to restock Chitek, Inland, Archies, Crab and Waterhen Lakes. This is an ideal example of when a hatchery and stocking are useful tools as there is no concern of interfering with existing natural spawning opportunities.



Hatcheries can offer an opportunity to rear fry where limited natural spawning conditions exist. The fry are then used to stock lakes. Stocking is a useful tool in "put and take" fisheries, or in creating a fishery that did not exist.

EDUCATION

Education, of both adults and young people, helps to create a caring public that will ensure fish and their habitat will not be lost to future generations. Fisheries Branch has sought to educate aquatic stewards in subjects ranging from fish biology and population requirements to alternative species and the option of catch and release. In doing so, concerned and educated individuals and groups have become involved in managing the resource. They collect data, work on habitat enhancement projects, offer suggestions for improving regulations and become themselves a means for promoting fisheries education. All of us can make constructive contributions to improving the environment in which we live, but first we need to know why and how.

PROJECTS:

1. **Northern Manitoba**
   Nelson River Sturgeon Co-Management Board
   Funding: $25,000
   Project Status: Completed

A variety of educational materials were produced (annual newsletter, CD-rom, web-site, brochure and displays) and distributed by an individual from each participating community. The participating communities were Norway House, Cross Lake, Wabowden, Thicket Portage, Pikwitonei, Split Lake and York Landing.

2. **Provincial**
   Fish Futures Inc.
   Funding: $9,000
   Project Status: Completed

Fifty thousand copies of an educational booklet called "Get Hooked on Fishing" were produced. The booklet is aimed at children ages five and up and contains puzzles, crosswords and quizzes relating to fish biology, habitats, food chains and fishing techniques. It is distributed to the general public at various events and through requests.

3. **South Tobacco Creek**
   Deerwood Soil and Water Management Association
   Funding: $11,500
   Project Status: Completed

This study has direct implications for future watershed management planning and the use of small headwater dams as nutrient catchment basins. Precipitation (rainfall/snowfall) and runoff water was monitored, sampled and analysed and watershed land management practices inventoried.

4. **Provincial**
   Manitoba Arts Network
   Funding: $4,500
   Project Status: Completed

The Manitoba Arts Network promoted the Fisheries Enhancement Annual Stamp Competition and Manitoba's abundant artistic talent through a 12-month exhibit of the 2001 entries. The exhibition started at the Sam Waller museum in The Pas. Educational fisheries material that Fisheries Branch developed was also provided to each gallery for their community programming.

5. **Fort Whyte Centre**
   Funding: $25,000
   Project Status: Completed

Fort Whyte is using a newly acquired lake as both a sport fishery and an aquatic education field site. They needed assistance in developing the Aquatic Field Station, a year round facility constructed to hold fishing education programs and field studies. The sport fishery and field station compliments the branch's educational objectives and the Urban Angling Program that Fisheries Branch developed.

6. **Kids and Creeks - Broughten Creek**
   Little Saskatchewan River Conservation District
   Funding: $6,000
   Project Status: Completed

A water quality test kit, reactants and supplies were purchased and are being used to increase awareness on the Little Saskatchewan River watershed, in particular Broughten's Creek. High school students used the equipment to monitor and evaluate water quality. The Conservation District is looking at a five-year commitment to this program. Results will be useful to the steering committee involved in the Broughten Creek integrated watershed plan.

7. **Provincial**
   Rural Options Consulting
   Funding: $4,500
   Project Status: Completed

The proponent will continue to promote the Fisheries Enhancement Initiative Fund by researching and showcasing six projects in articles distributed to a number of media venues throughout Manitoba.

8. **Provincial**
   Manitoba Wildlife Federation
   Funding: $9,000
   Project Status: Completed

These funds provided first-time start-up costs for the Recreational Fishing League directed at Manitoba's youth. The two-year pilot project was very successful. The main program objective was to promote angling interest by providing angling opportunities for Manitoba youth. Each team of six to eight youth, between the ages of nine to 15 and under the direction of two coaches, went fishing weekly for a six-week period. Although they could fish as often as they wanted they could only submit their catch summary from one two-hour session per week. This catch summary was entered onto a web site where

A recreational fishing league offers kids from around the province a fun and friendly fishing event. Teams fish weekly and compete by entering their best catches.

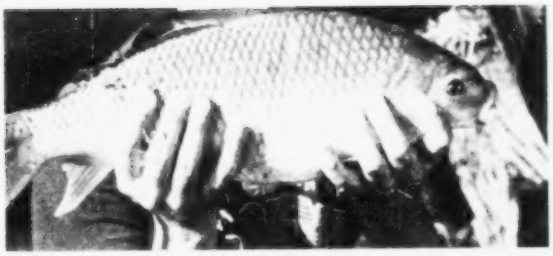
weekly tallies from all the teams were stored. An annual program, the Recreational Fishing League is a province-wide initiative.

9. Provincial

Fish Futures Inc.
Funding: $3,000
Project Status: Completed

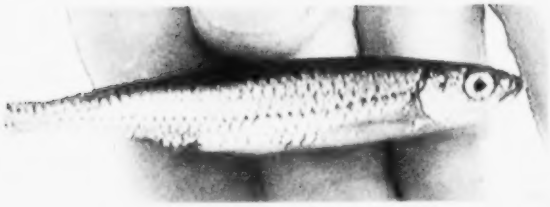
A consultant was hired to compile information on Manitoba's "Six Species of Concern" as identified through COSEWIC. The information included the species' biology, habitat preferences and threats to habitat. The consultant then designed and produced a brochure. The brochure will help to increase the public's understanding of COSEWIC designation and the species identified for Manitoba.

These six species have been designated by COSEWIC as "species of concern." A public information brochure, focusing on why they are important, their habitat and biology, was produced.



bigmouth buffalo

bigmouth shiner



brassy shiner

silver chub

chestnut lamprey

northern brook lamprey

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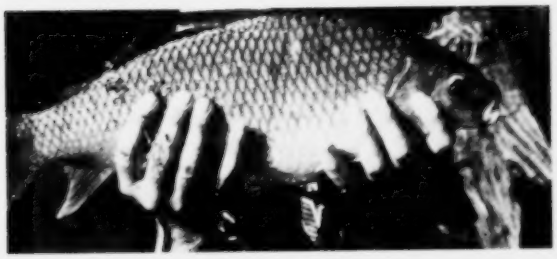
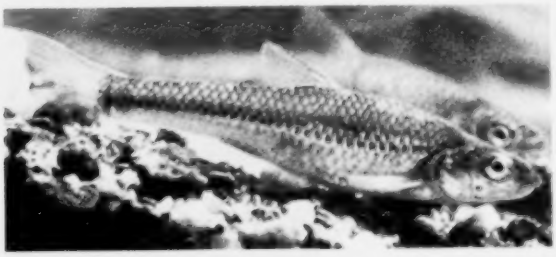
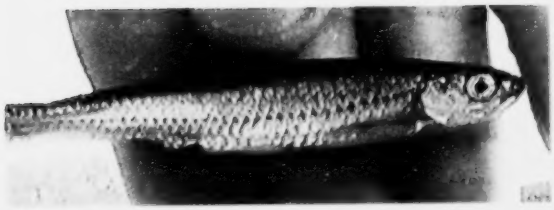


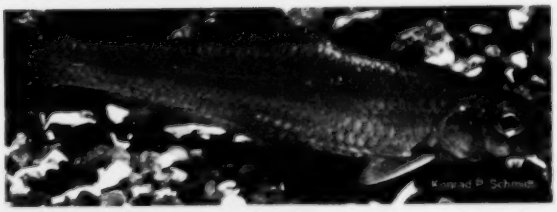
bigmouth buffalo



bigmouth shiner



rosyface shiner



silver chub

chestnut lamprey

northern brook lamprey

MANITOBA FISHERIES ENHANCEMENT INITIATIVE

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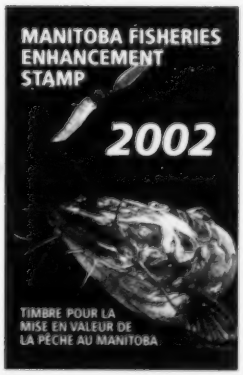

Images used for these enhancement stamps are also used for limited edition prints. For information